

Notice of Allowability

Application No.

10/617,427

Examiner

Pamela E. Perkins

Applicant(s)

GORMLEY ET AL.

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the after-final amendment filed on 29 December 2005.

2. ☒ The allowed claim(s) is/are 1-35.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

DETAILED ACTION

This office action is in response to the filing of the after-final amendment on 29 December 2005. Claims 1-35 are pending; claims 36-38 have been cancelled.

Allowable Subject Matter

Claims 1-35 are allowed.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: prior art does not disclose teach or suggest applying a support layer to each bridging portion of a buried insulating layer the support layer extending across each trench, and being applied to each bridging portion of the buried insulating layer prior to the bridging portion being exposed by a communication opening through a handle layer for supporting the bridging portion from preventing rupturing of the buried insulating layer when the buried insulating layer is exposed by the communication opening through the handle layer..

For example, Gormley (6,818,564) discloses a method for forming a micro-mechanical component in a semiconductor wafer where a membrane layer supported on a handle layer with a buried insulating layer disposed between the membrane layer and the handle layer, the micro-mechanical component being formed in the membrane layer, and a communicating opening extending through the handle layer and the buried insulating layer exposing the micro-mechanical component; forming at least one trench

extending through the membrane layer for defining the micro-mechanical component therein, each trench exposing a portion of the buried insulating layer bridging the trench.

However, Gormley does not disclose, anticipate, teach, or suggest applying a support layer to each bridging portion of a buried insulating layer the support layer extending across each trench, and being applied to each bridging portion of the buried insulating layer prior to the bridging portion being exposed by a communication opening through a handle layer for supporting the bridging portion from preventing rupturing of the buried insulating layer when the buried insulating layer is exposed by the communication opening through the handle layer.

Peeters et al. (6,300,665) disclose a method for forming a micro-mechanical component in a semiconductor wafer where a membrane layer supported on a handle layer with a buried insulating layer disposed between the membrane layer and the handle layer, the micro-mechanical component being formed in the membrane layer, and a communicating opening extending through the handle layer and the buried insulating layer exposing the micro-mechanical component; forming at least one opening extending for defining the micro-mechanical component therein, each opening exposing a portion of the membrane layer bridging the openings, applying a support layer to each bridging portion, the support layer extending across each opening, and being applied to each bridging portion prior to the bridging portion being exposed by the communicating opening through the handle layer.

However, Peeters et al. do not disclose, anticipate, teach or suggest applying a support layer to each bridging portion of a buried insulating layer the support layer

extending across each trench, and being applied to each bridging portion of the buried insulating layer prior to the bridging portion being exposed by a communication opening through a handle layer for supporting the bridging portion from preventing rupturing of the buried insulating layer when the buried insulating layer is exposed by the communication opening through the handle layer.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela E. Perkins whose telephone number is (571) 272-1840. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on (571) 272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PEP


ZANDRA V. SMITH
SUPERVISORY PATENT EXAMINER
8 January 2006